



# OptimAir® MM 2K PAPR with Type HE OptiFilter® XL Cartridge

## Features

- Lightweight, compact design
- Rechargeable Nickel Metal Hydride (NiMH) Battery for 8 hours' continuous use
- Water-resistant battery
- Standard dual-rate smart charger
- Designed for easy decontamination
- Water-resistant HEPA filter
- Choice of Advantage® 3000, Ultravue® or Ultra Elite® Facepiece
- Meets impact and penetration requirements of ANSI Z87.1 (eye and face protection standard)

## Description

The OptimAir MM 2K Powered Air-Purifying Respirator (PAPR) is especially suited for use by workers in abatement, nuclear, lead, and other industries that have hazardous particulate environments. It has a mask-mounted motor/blower with HEPA filter for protection against particulate contaminants, such as dusts, fumes, mists, and radionuclides. Because it does not have a breathing tube, the unit is more compact than other PAPRs, thus enhancing user maneuverability and simplifying decontamination.

The PAPR filters particulates and provides a constant flow of respirable air directly to the facepiece. Air pressure inside the facepiece is higher than the air pressure in the surrounding atmosphere. Therefore, in the event of a small leak in the face-to-facepiece seal, air will flow from inside the facepiece to the outside. This constant flow of air also provides a cooling effect on the user's face.

Designed for high performance, the facepiece, motor/blower, and filter of the OptimAir MM 2K PAPR combine to produce air flows higher than comparable units with mask-mounted motor/blowers. All components are designed for long life and low maintenance.

## **Advantage 3000/Ultravue/Ultra Elite**

### **Facepieces:**

Whether you choose the Advantage 3000, Ultravue or Ultra Elite, all three are available in three sizes to accommodate a wide range of users. The Advantage 3000 has a silicone rubber facepiece, while the Ultravue and Ultra Elite Facepieces are available in a choice of silicone or Hycar™ rubber. All facepieces have a scratch-resistant polycarbonate lens that provides a wide field of vision. Optional lens cover accessories provide even greater scratch resistance (see page 4). All three facepieces feature an inhalation check valve and exhalation valve that work together to help prevent exhaled air from entering and contaminating the motor/blower assembly.

### **Motor/Blower Assembly:**

The motor/blower assembly, which threads onto the facepiece inlet, is compact and lightweight so as not to obstruct vision or impair facepiece fit. The motor is designed for long life and low maintenance.



### **NiMH Battery Pack:**

The sealed, lightweight NiMH battery pack weighs only 12.5 oz. (360 grams). The low-profile unit fits closely to the wearer's body. In fact, the battery pack is small enough to fit in

most pockets. Besides providing a compact and lightweight battery pack, NiMH batteries do not have the "memory effect" that is associated with NiCad batteries. The power source delivers 4.8 volts (nominal) to the motor/blower



and is designed to operate over 8 hours under most operating conditions. The battery pack is water-resistant and is designed for easy shower decontamination. The battery pack is

connected to the motor/blower with a heavy-gauge coated power cable. The cable includes a lockable connector to the motor/blower and battery pack.

### **Dual-Rate Smart Charger**

Each OptimAir MM 2K PAPR is supplied with a dual-rate smart charger that will charge a fully discharged battery in less than 3 hours. A single, 3-color LED indicates battery condition: fast charge, fully charged, or battery fault condition. After the battery reaches full charge, the charger switches to a trickle-charge to prevent overcharging the battery. The smart charger can be connected indefinitely to the battery pack without damaging the battery. The compact battery charger has a rated service of 100-264 volts @ 50/60 Hz.

### **Type HE OptiFilter Cartridge:**

The Type HE OptiFilter Cartridge is a high-efficiency particulate air (HEPA) filter. A single, high-performance OptiFilter XL Cartridge fits onto the motor/blower when the PAPR is used. The lightweight filter has an unrestricted air-inlet opening that helps prevent gross debris from clogging the filter.

The Type HE OptiFilter XL Cartridge may be equipped with the OptiFilter XL Prefilter/Cover. To extend the life of the OptiFilter XL Cartridge, the prefilter/cover is an economical three-piece assembly that protects the cartridge from contaminants such as water spray and gross ACM. Particulate matter that does reach the prefilter is trapped before reaching the main cartridge filter. When loaded with



particulates, the entire Prefilter/Cover Assembly can be discarded and replaced. Or, for maximum savings, discard and replace only the inexpensive prefilter.

For users working with asbestos, the Type HE OptiFilter XL Cartridge may also be equipped with an optional storage plug that has a special one-way valve. The plug is used during exiting and reentering containment to help prevent gross asbestos debris from falling out of the cartridge. The plug also helps to prevent shower water from reaching the filter media.

### **Waist Belts:**

OptimAir MM PAPR's are supplied with a clear polyvinylchloride (PVC) belt with a slide-through friction buckle. The belt, designed for easy decontamination and comfort, accommodates waists up to 48 inches. Optional belts are listed on page 4.



## Ordering Information

### Complete OptimAir MM 2K PAPR Assemblies

All assemblies include: motor/blower, NiMH battery, dual-rate battery charger, cable, one Type HE OptiFilter XL Cartridge, belt, and choice of Advantage 3000, Ultravue or Ultra Elite Facepiece.

|                        | Advantage 3000 PAPR |          |          |
|------------------------|---------------------|----------|----------|
|                        | Small               | Medium   | Large    |
| with Rubber Harness    | 10034152            | 10034150 | 10034151 |
| with Advantage Harness | 10034155            | 10034153 | 10034154 |

| Material       | Ultravue PAPR |          |          | Ultra Elite PAPR |          |          |
|----------------|---------------|----------|----------|------------------|----------|----------|
|                | Small         | Medium   | Large    | Small            | Medium   | Large    |
| Black Silicone | 10023881      | 10023859 | 10023880 | 10023886         | 10023887 | 10023885 |
| Black Hycar    | 10023858      | 10023569 | 10023857 | 10023882         | 10023883 | 10023884 |

### OptimAir MM 2K PAPR Upgrade Kit

Upgrade Kit includes: motor/blower module, NiMH battery, dual-rate battery charger, cable, one Type HE OptiFilter Cartridge, and belt. Use your present demand-style Ultravue or Ultra Elite Facepiece or order facepiece separately from table below.

|                            |          |
|----------------------------|----------|
| OptimAir MM 2K Upgrade Kit | 10025945 |
|----------------------------|----------|

### Replacement Facepieces

#### Advantage 3100 Single-Port Respirator Facepiece

|                        | Small    | Medium   | Large    |
|------------------------|----------|----------|----------|
| with Rubber Harness    | 10028999 | 10028998 | 10029000 |
| with Advantage Harness | 10031343 | 10031342 | 10031344 |

| Material       | Ultravue Facepiece |        |        | Ultra Elite Facepiece |        |        |
|----------------|--------------------|--------|--------|-----------------------|--------|--------|
|                | Small              | Medium | Large  | Small                 | Medium | Large  |
| Black Silicone | 480251             | 480247 | 480255 | 493072                | 493028 | 493116 |
| Black Hycar    | 471218             | 457126 | 471230 | 493064                | 493020 | 493108 |

### Replacement Parts

|  |          |
|--|----------|
| NiMH Battery Pack for OptimAir MM 2K         | 10023481 |
| Motor/Blower Assembly                        | 10023482 |
| Cable Assembly                               | 10023480 |
| Dual-Rate Battery Charger for OptimAir MM 2K | 10023483 |

### OptiFilter® Cartridges for OptimAir MM 2K PAPR

| Cartridge              | Purifying Protection Code | No. in Box | Part No. |
|------------------------|---------------------------|------------|----------|
| OptiFilter XL, Type HE | HE                        | 20         | 10042346 |
| OptiFilter XL, Type HE | HE                        | 6          | 496081   |

### Accessories

|   |        |
|---|--------|
| OptiFilter XL prefilter/cover assembly to protect the cartridge from water-spray and gross asbestos-containing material | 497098 |
| Prefilters, box of 50   | 493524 |
| Flow-Check Meter  | 487995 |
| Adapter for Flow-Check Meter, for use with OptimAirMM PAPR  | 491046 |
| Storage Plug for Type HE OptiFilter XL  |        |

## Specifications

### Weight

|                          |          |
|--------------------------|----------|
| Advantage 3000 Facepiece | 16.8 oz. |
| Ultravue Facepiece       | 19.2 oz. |
| Ultra Elite Facepiece    | 24.0 oz. |
| Motor/Blower with cable  | 7.0 oz.  |
| Battery Pack             | 12.5 oz. |
| Optifilter Cartridge     | 3.7 oz.  |

### Motor/Blower

Approximately 1500 hours

### Battery

Nickel Metal Hydride rechargeable battery pack provides 8 hour (one shift) of continuous use.

Life: Up to 1,000 charge/discharge cycles.



## Limitations

The OptimAir MM 2K PAPR with Type HE OptiFilter XL Cartridge is approved as a high-efficiency particulate air PAPR.

The OptimAir MM 2K PAPR does not remove vapors or gases from the air. No filter is designed for all concentrations of all substances. Therefore, it is essential to understand what the contaminant is and to know its concentration and explosive limit before selecting a respirator.

The OptimAir MM 2K PAPR does not supply oxygen. Therefore, it should not be used unless the surrounding air contains a minimum of 19.5% oxygen. The respirator may be used in temperatures between 0°F and 120°F (-17°C to 49°C); however, if used in temperatures below 40°F (4.4°C), the fully charged battery will not operate for a full eight hours.

The replaceable filter cartridge, which traps the particulate contaminant, is a minimum of 99.97% efficient against 0.3 micron DOP.



## Accessories

### Waist Belts

MSA offers an optional polyurethane-coated nylon belt that is easy to decontaminate. If decontamination is not a factor, users may also opt for an uncoated nylon web belt.

#### Part No. Description

|        |  |
|--------|--|
| 473902 | PVC Waist Belt, standard on OptimAir MM2K PAPR |
| 492827 | Polyurethane-coated Nylon Belt                 |
| 9961   | Uncoated-Nylon Web Waist Belt                  |

### OptimAir MM 2K Carrying/Storage Case

Black plastic case suitable for carrying/storing the OptimAir MM 2K PAPR.



| Part No. | Description           |
|----------|-----------------------|
| D2056734 | Carrying/storage case |

### Spectacle Kit



For use by workers who must wear corrective lenses, the spectacle kit can be easily inserted into the facepiece. The kit includes a wire support, rubber guide and one pair of metal-frame spectacles.

#### Part No. Description

|          |  |
|----------|--|
| 10029298 | Prescription Eyeglass Kit for Advantage 3000 Facepiece (S-7 shape, 44 mm lens) |
| 454819   | Prescription Eyeglass Kit for Ultravue Facepiece (S-7 shape, 44 mm lens)       |
| 804638   | Prescription Eyeglass Kit for Ultra Elite Facepiece (S-7 shape, 40 mm lens)    |

### Lens Covers

MSA offers an assortment of facepiece accessories that provide added lens durability or shading for special applications.

Lens covers, either smoke-tinted or clear, provide a convenient way to add a layer of protection against scratches.

#### Part No. Description

|          |   |
|----------|---|
| 10031542 | Advantage 3000 Clear Lens Covers (25 per package)     |
| 10031543 | Advantage 3000 Smoke tinted Covers (25 per package)   |
| 456975   | Ultravue Clear Lens Covers (25 per package)           |
| 480326   | Ultravue Smoke-tinted Lens Covers (25 per package)    |
| 491500   | Ultra Elite Clear Lens Covers (25 per package)        |
| 805456   | Ultra Elite Smoke-tinted Lens Covers (25 per package) |

### MSA Confidence Plus® Germicidal Cleaner



Mix with warm water for a germicidal cleaner that is effective against various micro-organisms including

immunodeficiency virus Type 1 (HIV-1) (associated with AIDS). EPA-approved for use on safety equipment.

#### Part No. Description

|          |   |
|----------|---|
| 10009971 | MSA Confidence Plus Germicidal Cleaner in 32 oz. bottle |
|----------|---|

### Approvals and Standards

The OptimAir MM 2K PAPR with either the Ultravue or Ultra Elite Facepiece and OptiFilter XL Cartridge has NIOSH approval TC-21C-0758.

The OptimAir MM 2K PAPR with the Advantage 3100 Series Facepiece and OptiFilter XL Cartridge has NIOSH approval TC-21C-0763.

The filters must be replaced when air flow drops below 4 cfm (115 lpm).

**IMPORTANT: The OptimAir MM 2K PAPR is not NIOSH-approved for use with gas, chemical or combination cartridges. Use only Type HE OptiFilter XL Filter.**

**Note:** This Bulletin contains only a general description of the products shown. While uses and performance capabilities are described, under no circumstances shall the products be used by untrained or unqualified individuals and not until the product instructions including any warnings or cautions provided have been thoroughly read and understood. Only they contain the complete and detailed information concerning proper use and care of these products.



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